6/28/2007

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for for	m 1449/PTO	Complet	e if Known
	INFORMATION DISCLOSURE	Application Number	10/810,518
		Filing Date	March 26, 2004
	STATEMENT BY APPLICANT	First named Inventor	Thomas H. Barrows
		Group Art Unit	1651
	(use as many sheets as necessary)	Examiner name	Deborah K. Ware
	Sheet 1 of 3	Attorney Docket Number	010414-9012-US00
		U.S. Patent Documents	
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
	4,947,840	Yannas et al.	8/14/1990
	5,712,169	Bernard et al.	1/27/1998
	5,767,152	Nielsen et al.	6/16/1998
	5,817,120	Rassman	10/6/1998
	5,891,426	Jarrousse et al.	4/6/1999
	5,989,279	Rassman	11/23/1999
	6,878,383	Boss, Jr. et al.	4/12/2005
	2002/0172705	Murphy et al.	11/21/2002
	2003/0077823	Li et al.	4/24/2003
	2003/0147831	Marko	8/7/2003
	2003/0166274	Hewitt et al.	9/4/2003
	2003/0235813	Luyten et al.	12/25/2003
	2004/0220589	Feller	11/4/2004
	2005/0089512	Schlotmann et al.	4/28/2005
	2005/0106723	Hatzfeld et al.	5/19/2005
	2005/0147652	Atkins et al.	7/7/2005
	2005/0233450	Goetinck et al.	10/20/2005
	2005/0272150	Teumer et al.	12/8/2005
	2006/0057126	Tankovich	3/16/2006
	2007/0092496	Zheng et al.	4/26/2007
	2007/0122387	Cochran et al.	5/31/2007
. 1	0007/01/0100	1	1

Examiner	Date	
Signature	Considered	

Barrows et al.

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

2007/0148138

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for for	rm 1449/PTO	Comp	lete if Known
	INFORMATION DISCLOSURE	Application Number	10/810,518
		Filing Date	March 26, 2004
	STATEMENT BY APPLICANT	First named Inventor	Thomas H. Barrows
		Group Art Unit	1651
	(use as many sheets as necessary)	Examiner name	Deborah K. Ware
Sheet 2 of 3 Attorney Docket Number 010414-9012-US00			
		U.S. Patent Documents	
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
	2007/0233038	Pruitt et al.	10/4/2007
	11/811744	Zheng et al.	6/12/2007

·			OREIGN PATENT DOCUME	NTS		
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
	CN	1594554	Institute of Basic Medicine et al.	3/16/2005		
	EP	1337624	Daig	9/20/2006		
	EP	1612265	Organogenesis Inc.	1/4/2006		
	EP	1702632	Biointegrence Inc.	9/20/2006		
	JР	4108444	Gunze KK	4/9/1992		
	JР	11180878	Toyo Boseki	7/6/1999		
	JР	2001302520	Takahashi Akemasa et al.	10/31/2001		
	JP	2003070466	Shiseido Co. Ltd.	3/11/2003		-
	JР	2003189849	Shiseido Co. Ltd.	7/8/2003		
	JР	2003238421	Institute of Immunology Co. Ltd.	8/27/2003		
	wo	03/088935	Aderans Research Institute, Inc.	10/30/2003		
	wo	2006/020958	Aderans Research Institute, Inc.	2/23/2006		
	wo	2006/057542	Lifecord International Co., Ltd.	6/1/2006		
	wo	2007/047707	Aderans Research Institute, Inc.	4/26/2007		
	wo	2007/062386	Aderans Research Institute, Inc.	5/31/2007		
Examiner Signature				Date Considered		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	for form 1	449/P	го	Complete if Known					
	IN	FOE	RMATION DISCLOSUI	RT.	Application Number 10/810,518				
	STATEMENT BY APPLICANT				Filing Date		March 26,	2004	
	91	IAI	EMENT BY APPLICAN	11	First named Inv	entor	Thomas H	I. Barrows	
					Group Art Unit		1651		
		(u	se as many sheets as necessary)		Examiner name		Deborah I	K. Ware	
			Sheet 3 of 3		Attorney Docket	Number	010414-90	012-US00	
									<u> </u>
				U.S. Patent	Documents				
			F	OREIGN PATE	NT DOCUME	NTS			
Examiner Initials	Cou	-	Foreign Patent Document Number	Name of Pa Applicant of Cit		Date of Publication Document		Translation	English Abstract
	W	О	2007/062387	Aderans Resea Inc	•	5/31/2007	7		
	W	О	2007/092929	Aderans Resea Inc	•	8/16/2007	7		

	 	, , <u>, , , , , , , , , , , , , , , , , </u>
Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO				Complete if Known		
				Application Number	10/810,518	
INFORMATION DISCLOSURE			OSURE	Filing Date	March 26, 2004	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Thomas H. Barrows	
				Group Art Unit	1651	
	(use as many she	ets as necessary)	Examiner Name	Deborah K. Ware	
Sheet	1	of	4	Attorney Docket Number	010414-9012-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	AUGER et al., "A truly new approach for tissue engineering: the LOEX self-assembly technique" Ernst Schering Res. Found. Workshop (2002) 35:73-88
	BARROWS, "Project One: Update Report, July 3-30, 2004" (2004) 2-3
	CLAUDINOT et al., "Long-term renewal of hair follicles from clonogenic multipotent stem cells," PNAS (2005) 102:14677-14682
	COTSARELIS, G. et al., "Towards a molecular understanding of hair loss and its treatment," Trends Mol. Med. (2001) 7:293-301
	GHO et al., "Hair transplantation of plucked hair biopsies," Dermatol. Surg. (2001) 27(10):913
	GHO et al. To Multiply or Not to Multiply, That is the Question, Dr. Coen Gho presentation at the International Society of Hair Restoration Surgeons 2003 New York City Conference, October 19, 2003 (Abstract)
	HORCH, R.E. et al., "Tissue engineering of cultured skin substitutes," J. Cell Mol. Med. (2005) 9(3):592-608
	IHARA, S. et al., "Formation of hair follicles from a single-cell suspension of embryonic rat skin by a two-step procedure in vitro," Cell Tissue Res. (1991) 266:65-73
	KRUGLUGER, W. et al., "Reorganization of hair follicles in human skin organ culture induced by cultured human follicle-derived cells," Exp. Dermatol. (2005) 14(8):580-585

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for t	For form 1449B/PTO				Complete if Known	
				Application Number	10/810,518	
INFORMATION DISCLOSURE		Filing Date	March 26, 2004	-		
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Thomas H. Barrows	
				Group Art Unit	1651	
	(use as many she	ets as necessary)	Examiner Name	Deborah K. Ware	
Sheet	2	of	4	Attorney Docket Number	010414-9012-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	LAYER, P.G. et al., "Of layers and spheres: the reaggregate approach in tissue engineering," Trends Neurosci. (2002) 25:131-134
	LEE, K.H., "Tissue-engineered human living skin substitutes: development and clinical application," Yonsei Med. J. (2000) 41(6):774-779
	LUO et al., U.S. Statutory Invention Registration H1610, Published 11/5/1996, Methods for Culturing Hair Follicle Epithelial Matrix Cells
	LUO Y., et al. "Modification of Natural Polymers: Hyaluronic Acid," Methods of Tissue Engineering, Chapter 45, A. Atala and RP Lanza. eds., Academic Press (2002) 539-553
	MAGERL, M. et al., "Simple and rapid method to isolate and culture follicular papillae from human hair follicles," Exp. Dermatol. (2002) 11:381-385
	MATSUZAKI et al., "Localization and migration of follicular melanocyte precursors in mouse vibrissae during hair cycle," Zoological Science (2002) 19(12):1450
	MAYOROV, V.I. et al., "B2 elements present in the human genome," Mamm. Genome (2000) 11:177-179
	MICHEL et al., "Characterization of a new tissue-engineered human skin equivalent with hair," In Vitro Cell Dev Biol. Anim. (1999) 35(6):318-326
	MISAGO, N. et al., "Proliferation and differentiation of organoid hair follicle cells co-cultured with fat cells in collagen gel matrix culture," Br. J. Dermatol. (1998) 139(1):40-48

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO		Complete if Known				
3.35.4.4.5				Application Number	10/810,518	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			OSURE	Filing Date	March 26, 2004	
			ICANT	First Named Inventor	Thomas H. Barrows	
				Group Art Unit	1651	
)	Examiner Name	Deborah K. Ware	
Sheet	3	of	4	Attorney Docket Number	010414-9012-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	MIYASHITA et al., "Characterization of hair follicles induced in implanted, cultured rat keratinocyte sheets," Exp. Dermatol. (2004) 13(8):491-498
	OLIVER, R.F., "Ectopic regeneration of whiskers in the hooded rat from implanted lengths of vibrissa follicle wall," J. Embryol. Exp. Morphol. (1967) 17:27-34
	OSADA et al., "Characterization of vibrissa germinative cells: transition of cell types," Exp. Dermatol. (2001) 10:430-437
	POULIOT et al., "Reconstructed human skin produced in vitro and grafted on athymic mice," Transplantation (2002) 73(11):1751-1757
	PRICE, V.H., "Treatment of Hair Loss," N Eng J Med (1999) 341:964-973
	RATNER, B.D. et al., "Biomaterials: where we have been and where we are going," Annu. Rev. Biomed. Eng. (2004) 6:41-75
	ROBINSON, M. et al., "Hair cycle stage of the mouse vibrissa follicle determines subsequent fiber growth and follicle behavior in vitro," J. Invest. Dermatol. (1997) 108:495-500
	SAYWELL, D.P. et al., "Cell proliferation during fibre growth initiation in ferret hair follicles," Proceedings of the New Zealand Society of Animal Production (1992) 52:299-302
	STENN et al., "Bioengineering the hair follicle: fringe benefits of stem cell technology," Curr. Opin. in Biotech. (2005) 16:1-5

Examiner	Date
Signature	Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO				Complete if Known		
33333333 333 3333 3 7 7 3 7 3 7 3 7 3 7				Application Number	10/810,518	
INFOR	INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Filing Date March 26, 2004		
STATE				First Named Inventor	Thomas H. Barrows	
				Group Art Unit	1651	
(use as many sheets as necessary))	Examiner Name	Deborah K. Ware	
Sheet	4	of	4	Attorney Docket Number	010414-9012-US00	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner : Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.				
	THORNTON, M.J. et al., "Ability to culture dermal papilla cells from red deer (Cervus elaphus) hair follicle differing hormonal responses in vivo offers a new model for studying the control follicle biology," J. Experimental Zoology (1996) 275(6):452-458				
	YANG et al., "Cell sheet engineering: recreating tissue without biodegradable scaffolds," Biomaterials (2005) 26(33):6415-6422				

Examiner		Date	
Signature	· ·	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.